AMENDMENTS TO THE CLAIMS (NONE)

This listing of claims will replace all prior versions and listings of claims in the application:

1-48. (Canceled)

49. (**CURRENTLY AMENDED**) A method of identifying a compound that activates or inhibits sweet taste signal transduction in taste cells, the method comprising the steps of:

(i) contacting the compound with a cell expressing a sweet taste receptor comprising a T1R3 polypeptide and a T1R2 polypeptide, wherein the T1R3 polypeptide has a ~~greater than 90% amino acid sequence identity to SEQ ID NO: 20, 23, or 25~~ greater than 93% amino acid sequence identity to SEQ ID NO: 20 or greater than 93% amino acid sequence identity to SEQ ID NO: 23; and wherein the T1R2 polypeptide has a greater than ~~90%~~ 92% amino acid sequence identity to ~~SEQ ID NO: 7 or 8~~ SEQ ID NO:8; and

(ii) determining the functional effect of the compound upon the receptor, wherein said functional effect is binding to the receptor or having an effect on the activity of the receptor, thereby identifying a compound that activates or inhibits sweet signal transduction,

wherein the sweet taste receptor specifically binds a sweet compound, and at least one of the T1R3 and T1R2 polypeptides is recombinant.

50. (Previously presented) The method of claim 49, wherein the T1R2 polypeptide and the T1R3 polypeptide are non-covalently linked.

51. (Previously presented) The method of claim 49, wherein the T1R2 polypeptide and the T1R3 polypeptide are covalently linked.

52-55. (Canceled)

56. (**CURRENTLY AMENDED**) The method of claim 49, wherein the T1R3 polypeptide has an amino acid sequence of ~~SEQ ID NO: 20, 23, or 25~~ SEQ ID NO: 20 or 23.

57. (**CURRENTLY AMENDED**) The method of claim 49, wherein the T1R2 polypeptide has an amino acid sequence of ~~SEQ ID NO:7 or 8~~ SEQ ID NO: 8.

58. (Previously presented) The method of claim 49, wherein the T1R3 and T1R2 polypeptides are both recombinant.

59-66. (Canceled)

67. (Previously presented) The method of claim 49, wherein the functional effect is determined by measuring ligand binding to the receptor.

68. (Canceled)

69. (Previously presented) The method of claim 49, wherein the functional effect is a chemical or phenotypic effect.

70. (Previously presented) The method of claim 49, wherein the functional effect is determined by measuring changes in intracellular cAMP, IP3, or Ca^{2+}.

71. (Previously presented) The method of claim 49, wherein the cell is a mammalian cell.

72. (Previously presented) The method of claim 71, wherein the cell is a human cell.

73-74. (Canceled)

75. (**CURRENTLY AMENDED**) A method of identifying a compound that activates or inhibits sweet taste signal transduction in taste cells, the method comprising the steps of

(i) contacting the compound with a cell expressing a sweet taste receptor comprising a T1R3 polypeptide and a T1R2 polypeptide, wherein the T1R3 polypeptide has a greater than ~~90% amino acid sequence identity~~ 93% amino acid sequence identity to SEQ ID NO:20 ; and wherein the T1R2 polypeptide has a greater than ~~90% amino acid sequence identity~~ 92% amino acid sequence identity to SEQ ID NO:8; and

(ii) determining the functional effect of the compound upon the receptor, wherein said functional effect is binding to the receptor or having an effect on the activity of the receptor, thereby identifying a compound that activates or inhibits sweet signal transduction,

wherein the sweet taste receptor specifically binds a sweet compound, and at least one of the T1R3 and T1R2 polypeptides is recombinant.

76. (Previously presented) The method of claim 75, wherein the T1R2 polypeptide has the amino acid sequence of SEQ ID NO:8.

77-78. (Canceled)